THOUGHTS ON TUBERCULOSIS.

(ABSTRACT.)

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BY THE TERM PHTHISIS, or consumption, we understand that it is a disease characterized by wasting or emaciation Tubercle, tubercular disease and tuberculosis have gradually come to be regarded as identical with the term phthisis. As we study this important morbid condition it is essential that we consider it under general heads, as its pathology, symptoms, diagnosis, prognosis, and treatment. Its pathology involves a consideration of the histology, chemistry and general pathology of tubercle; that is, its cause, natural progress, and the theory of its production. The term tubercle would include the various forms, as infiltrated, milliary, cretaceous, and calcareous; its morbid anatomy, the lungs, the pleura, bronchial glands, alimentary canal, peritoneum, trachea, larynx, liver, mesenteric and lymphatic glands, spleen and kidneys, with other textures and organs.

Causes of tuberculosis are age, sex, hereditary tendency, vitiated air, climate, contagion, and occupation. Time or space will not permit me to enter more fully into detail. A discussion of the subject at this time must be upon a broad and general sense. During the ebb-and-flow tide of medicine, great changes have been evolved, and yet I doubt not that there are many yet in store for future delivery. Since A.D. 1810 our ideas and conceptions of this disease have radically changed. To-day we hold that tuberculosis is a specific, infectious, inflammatory condition, nonvascular, and nodular; that it holds the parasite in its substance; that it attacks any and every part of the body. When the tubercle is limited to the foci, there is a strong possibility of its spreading to other parts of the body. This tubercle is the most serious enemy to the human race. First, it contains the germ; secondly, this germ slays its thousands in many ways. Meat and milk of tuberculous animals are very important factors in the production of this disease. The researches of bacteriologists have proven beyond a doubt that there is an unceasing contest being waged between the invading bacillus upon the one side, and the living organism or leucocytes upon the other. The leucocytes stand guard while the bacterial invaders make the onslaught, and should the latter prove victorious the disease will be established.

It has been found by investigation that a certain per cent of all cases of tuberculosis, especially in children, was through the direct result of the introduction of bovine bacillus into the human body through the use of milk from cows that were tainted with the disease. Carnet made an investigation with regard to tubercle bacilli being found in the air. This exposition was exceedingly interesting. There were taken into consideration twenty-one wards of seven hospitals, three asylums, two prisons, and the living rooms of sixty-two tubercular patients, besides outdoor patients, public streets, and inhalation experiments. Ninety-four susceptible animals were inoculated with the dust from hospital wards. Of these twenty became tuberculous. Negative results were obtained from the dust of surgical wards and from that of the streets. One hundred and seventy animals were inoculated with the dust secured from the living rooms of consumptives. Of this number thirty-four became infected, and ninety-one of the 170 died from septic diseases. We therefore infer that, as the dust was taken from the walls, furniture and picture frames, it does not show an accurate, specific virulence. During the years from 1863 to 1888 one of the city wards of Philadelphia became of great interest. One-third of the houses in the ward were infected, and one-half of the deaths from tuberculosis occurred in the infected houses.

During a term of twenty-five years a careful record was kept of thirty-eight Catholic convents, whose yearly average was 1428 persons. Strenuous efforts were made to secure only healthy inmates, and yet the mortality from the great white plague was one-seventh to one-fifth of all the deaths. We have to-day writers upon the subject of tuberculosis who make the statement that it is intensely contagious, that it is never hereditary, and that it is readily amenable to treatment. These assertions, in the main, are extravagant. No physician can make such unqualified statements, and they are not justifiable. He has no data to prove that the disease is intensely contagious, nor can he assert with any degree of assurance that it is never in any sense hereditary. Neither can he say truthfully that it is readily amenable to treatment. Our knowledge of the disease and its treatment is as yet too crude to warrant us in making such positive assertions.

The infection of tubercle may take place on a mucous surface, as the ear, nose and mouth, and by ingestion of the bacillus; or it may be transmitted through the agency of the blood. The primary cause being the tubercle bacilli, when they reach a point of least resistance, then and there the destructive process begins, the focus

is established, and from this systemic point of attack the disease may be extended.

What is the state of tuberculosis to-day? A very appropriate and suggestive question; one more easily asked than answered. Before Koch, the scientist, came on the field, drugs and food had played their part and gone. Cod-liver oil, phosphorus, hypophosphite, arsenic, iron, digitalis, phenol, quinia, creosote, and coal tar, each has been lauded as a cure-all; to-day they are considered simply as adjuncts. Sulphureted hydrogen gas at one time presented a bold front, but its memory is unsavory. Compressed air, one of the has-beens, is to-day relegated to the dim distance of the past. Climate at this time is in the forefront of the battle that is being waged against the great white plague.

It was considered that New Mexico possessed the finest climate possible. But what are the facts? The native Indians have perished there with this disease by the thousands. We are forced, therefore, to admit that climate is the least essential of the consumptive's necessities. The fact is, climatic treatment presents a problem to the physician that is surrounded by many difficulties. It is a question that is complex in character. When required to give advice, a large number of pertinent questions confront us: Will the financial and physical condition warrant the desired change? Would it be advantageous? If the change is to be made, what climate is preferable? Each case must be considered from an individual standpoint. Eschew from your mind the thought that all tuberculosis patients must go west, or that they must have a special climate in which to live. Such an idea is harmful, for it brings distress, blasting of hopes and throttling of courage. Disabuse the minds of the people upon the climate cure, for it is not a concrete, specific thing which can be secured only for the asking. The profession should encourage the building of sanitariums in the East, a much neglected territory. Hundreds of such institutions are needed to care for a large class who are unable to seek a special climate.

Tuberculosis is, as a rule, a protracted and rebellious disease. Is it incurable? No. Nor does a cure mean the complete eradication of every lesion, scar, alteration, transformation, or complication in the structure, functions or natural conditions of the organs that may result from the disease. I have no doubt but that the medical profession has suffered from the radical stand taken by Koch. The results obtained did not justify the unqualified position taken. So long as the pathology and treatment of tuberculo-

sis occupies its present status, just so long will we find the medical journals teeming with new ideas and extravagant statements.

We are confronted to-day with the idea of eradication. Working along this line, we find early and prompt action necessary. Every physician should work in harmony with his fellows to secure this end. That class of patients who need a change, and who would be helped by it, should be promptly placed under the best supervision possible. Our methods are slipshod and haphazard, and as a result thousands are forced from their homes at a time when there is not a particle of hope in store for them. This is unfair to the patient, and cruel in the extreme. There are various reasons why a large class of tuberculuos people cannot go from home. They not only need, but demand, sanitarium privileges at home. Correct environment is an important factor, and should be coupled with proper care, and the very best therapeutics possible in each individual case. Aid Nature, and thus increase her powers of resistance to disease, and perchance destroy the cause.

Scientific data are constantly accumulating which emphasize the danger of injections in tuberculosis. I believe Koch was mistaken in the premises taken. We find that he made a mistake when he stated that bovine and human tuberculosis were distinct and noncommunicable diseases. The British Royal Commission investigated Koch's theory and stated that the German scientist was wrong in his conclusions. The commission, desiring a fair and correct conclusion, made still further investigations, but arrived at the same conclusion, viz., that bovine bacillus is, or may be, introduced into the human body by the use of infected material. Recent investigation demonstrates the fact that tuberculous material from cattle has the highest virulence for all tested species, and that tuberculous material from man has a much lower virulence. These findings are sound, based, as they are, upon positive experimental evidence.

When we take into consideration the present conditions, coupled with a desire to arrest the fearful death rate from consumption, it will be necessary to interest the general public as well as the profession in all that pertains to the welfare of tubercular cases. Methods of prevention should be thoroughly understood and applied. Educate the masses upon sanitary laws and how to apply them to the best interests of all the people. This would be the most effective way to reach the end desired. It must be secured in the home, in the school; in fact, in all places, public and private. Should the people fail to recognize and practice the things essential to the preservation of life and health, then let the strong arm of the law be brought to bear upon or enforce the principles that should govern in these cases.